

Rumensin® for Lactating Cows

Rumensin® (monensin is the generic name) is an antibiotic which inhibits the growth of specific rumen microbes resulting in changes in rumen fermentation and metabolism:

- production of [propionic acid](#) increases, resulting in a decrease in the [acetate:propionate ratio](#) and a reduction in the amount of energy wasted as carbon dioxide and methane;
- [lactic acid](#) production decreases, blunting the sharp declines in rumen pH that often occur after large meals of rapidly fermentable starch;
- reduced feed protein breakdown results in a decrease in microbial protein and an increase in feed protein passing from the rumen;
- ammonia-producing bacteria which use amino acids and peptides as their sole energy sources are suppressed;
- reduction in the incidence of bloat due to the inhibition of bacteria which produce large amounts of gas-trapping mucous.

Based on our understanding of the nutrition of the lactating cow, improved energy efficiency, enhanced propionate production, a lower acetate:propionate ratio and reduced amino acid breakdown in the rumen should promote higher production accompanied by increased protein and decreased fat tests. The risk of [acidosis](#) should be reduced as a result of lower lactic acid production and reproductive performance might improve due to a more positive energy balance and lower ammonia production. Reduction in the incidence of [ketosis](#) has also been attributed to the effects of monensin on rumen metabolism.

In feedlot rations, monensin stabilizes intake. When feed is offered *ad libitum*, cattle eat less during each meal, eat more times per day and consume more consistent amounts from day to day. Total intake is usually lower but the combination of reduced intake and improved feed conversion efficiency generally results in a slight to significant improvement in daily gain.

In lactating cows, potential increases in milk production from the use of monensin will also depend on the balance between feed intake and feed conversion efficiency. If improved energy efficiency outweighs the negative effect of reduced dry matter intake, then increased output should be expected.

for more information:

[Feeding Rumensin® to Lactating Cows](#), Alberta Dairy Management